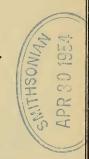
# OPINIONS AND DECLARATIONS RENDERED BY THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the Commission

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#### **OPINION 209**

Validation of, and designation of type species for, *Brissus* Gray, 1825, *Echinocardium* Gray, 1825, and *Spatangus* Gray, 1825 (Class Echinoidea) under the Plenary Powers, and designation, under those Powers, of a type species for *Schizaster* Agassiz (L.), 1836, and, in so far as necessary, for *Moira* Agassiz (A.), 1872

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## **OPINION 209**

VALIDATION OF, AND DESIGNATION OF TYPE SPECIES FOR, "BRISSUS" GRAY, 1825, "ECHINOCARDIUM" GRAY, 1825, AND "SPATANGUS" GRAY, 1825 (CLASS ECHINOIDEA) UNDER THE PLENARY POWERS, AND DESIGNATION, UNDER THOSE POWERS, OF A TYPE SPECIES FOR "SCHIZASTER" AGASSIZ (L.), 1836, AND, IN SO FAR AS NECESSARY, FOR "MOIRA" AGASSIZ (A.), 1872

**RULING**:—(1) The following action is hereby taken under the Plenary Powers: (a) The under-mentioned generic names are suppressed for the purposes both of the Law of Priority and of the Law of Homonymy: (i) Brissus Müller, 1781; (ii) Brissus Modeer, 1793; (iii) Brissus Link, 1807; (iv) Brissus Oken, 1815; (v) Brissus Dahl, 1823 (emend. of Bryssus Dejean, 1821); (vi) Bryssus Dejean, 1821; (vii) Brissus, as used by any other author prior to the publication of Brissus Gray, 1825; (viii) Echinocardium Leske, 1778 (in so far as that name was published by that author as a generic name); (ix) Spatangus Leske, 1778; (x) Spatangus Modeer, 1793; (xi) Spatangus, as used by any other author prior to the publication of Spatangus Gray, 1825. (b) The following names are validated: (i) Brissus Gray, 1825, (ii) Echino-cardium Gray, 1825, (iii) Spatangus Gray, 1825 (Class Echinoidea); (c) All type selections for the undermentioned genera made prior to the present Ruling are set aside, and the following species are designated as the type species for those genera:—(i) Echinus cordatus Pennant, 1777, to be the type species of Echinocardium Gray, 1825; (ii) Spatangus brissus var. unicolor Leske, 1778, to be the type species of Brissus Gray, 1825; (iii) Spatagus [sic] purpureus Müller (O.F.), 1776, to be type species of Spatangus Gray, 1825; (iv) Schizaster studeri Agassiz (J.L.R.), 1840, to be the type species of Schizaster Agassiz (J.L.R.), [1836].

- (2) In so far as such action may be necessary, the Plenary Powers are hereby used to designate *Spatangus atropos* Lamarck, 1816, to be the type species of *Moira* Agassiz (A.), 1872.
- (3) The reputed generic name *Brissus* Leske, 1778, possesses no status under the Law of Priority, having regard to the fact that this term was published by Leske in the nominative plural (as *Brissi*) instead of in the nominative singular as required by Article 8.
- (4) The under-mentioned generic names are hereby placed on the Official List of Generic Names in Zoology with the Numbers severally specified below:—(a) Brissus Gray, 1825 (gender of name: masculine), Echinocardium Gray, 1825 (gender of name: neuter), Spatangus Gray, 1825 (gender of name: masculine), as validated in (1)(b) above and with the type species designated in (1)(c)(i)—(iii) above (Names Nos. 638 to 640); (b) Schizaster Agassiz (J.L.R.), [1836] (gender of name: masculine), with the type species designated in (1)(c)(iv) above (Name No. 641); (c) Moira Agassiz (A.), 1872 (gender of name: feminine), with the type species designated in (2) above (Name No. 642); (d) Ova Gray, 1825 (gender of name: feminine) (type species, by monotypy: Spatangus canaliferus Lamarck, 1816) (Name No. 643).
- (5) The under-mentioned generic names or alleged generic names are hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology:—(a) the eleven names suppressed under the Plenary Powers in (1)(a) above (Names Nos. 13 to 23); (b) the reputed but non-existent name Brissus Leske, 1778, as rejected in (3) above (Name No. 24); (c) Prospatangus Lambert, 1902 (Name No. 25); (d) Moera Michelin, 1855 (Name No. 26).
- (6) The under-mentioned specific names are hereby placed on the *Official List of Specific Names in Zoology* as Names Nos. 14 to 19:—(a) atropos Lamarck, 1816, as published in the combination *Spatangus atropos*; (b)

canaliferus Lamarck, 1816, as published in the combination Spatangus canaliferus; (c) cordatus Pennant, 1777, as published in the combination Echinus cordatus; (d) purpureus Müller (O.F.), 1776, as published in the combination Spatagus [sic] purpureus; (e) studeri Agassiz (J.L.R.), 1840, as published in the combination Schizaster studeri; (f) unicolor Leske, 1778, as published in the combination Spatangus brissus var. unicolor.

#### I.—THE STATEMENT OF THE CASE

The present is the sixth of the eight cases relating to disputed Echinoderm names submitted to the International Commission on Zoological Nomenclature by the late Dr. Th. Mortensen (Universitetets Zoologisk Museum, Copenhagen) under cover of a letter dated 17th November 1932. The arguments in regard to these cases are set out in a paper by Dr. Mortensen entitled "A Vote on some Echinoderm Names", which had been published a month earlier (Mortensen, October 1932, Ann. Mag. nat. Hist. (10)10:345—368). This application is concerned with the complex of problems centreing around the well-known name Spatangus. The purpose of Dr. Mortensen's application was to secure from the International Commission decisions under its Plenary Powers which would provide a firm basis for the use of the following names attributed to the authors and dates shown below and with types species in harmony with accustomed usage:— Spatangus Gray, 1825, Echinocardium Gray, 1825, Brissus Gray, 1825, Schizaster Agassiz (J.L.R.), [1836], Moira Agassiz (A.), 1872, and Ova Gray, 1825.

2. As has been explained in *Opinion* 206 (paragraphs 1 and 2) relating to the name *Diadema* Gray, 1825 (a case which was submitted jointly with the present case), an extensive canvas of the views of active workers in the Echinoderms had been undertaken by Dr. Mortensen before the present case was submitted to the International Commission. Of the thirty-nine (39) specialists who had taken part in this consultation, thirty-six (36) had voted in support of it, two (2) had not voted, and one (1)

had voted against it. The sole opponent (Lambert) had based his objection on the entirely untenable ground that the first author to revise the genus *Spatangus* had been not Gray, 1825, but the pre-Linnean non-binominal author Klein.<sup>1</sup> The names and addresses of the specialists who took part in this consultation have already been given in *Opinion* 206 (*Diadema*).

#### II.—THE SUBSEQUENT HISTORY OF THE CASE

3. In December 1932 the then Secretary (the late Dr. C. W. Stiles) reported Dr. Mortensen's application to the Commission in Circular Letter 220. On 20th December of that year, he wrote also to the Director of the United States Geological Survey, expressing the hope that arrangements might be made for these proposals to be examined by the palaeontologists of the Survey. On 19th January 1933, the Director replied, forwarding five comments by members of the staff, of which one was signed by two workers. These comments, in so far as they relate to the present case, were as follows:—

## (a) Comment by L. W. Stephenson and C. Wythe Cooke:

I am in favour of codifying names concerning the strict validity of which there may be some question, if they have been in generally accepted use for long periods, but when it can be shown clearly that some other name has priority over a later more generally used name . . . is there not a danger of adding to, rather than subtracting from, the confusion? Will not some authors accept the rulings of the International Commission, while others will continue stoutly to maintain the validity of the names having priority? Furthermore, will not such rulings encourage a flood of demands for suspension of the Rules?

# (b) Comment by Lloyd G. Henbest:

Dr. Mortensen's petition to conserve and restore certain Echinoderm names seems to be reasonable, except in the case of [Here are mentioned certain names with which this *Opinion* is not concerned.]

<sup>&</sup>lt;sup>1</sup> Lambert's comment which was quoted by Mortensen (1932 : 360), was as follows:—"Non, car c'est Klein et non Gray qui a le premier divisé les Spatangues en plusieurs genres".

(c) Comment (dated 6th January 1933) by John B. Reeside, Jr.:

I see no particular objection to placing all of the names on the *List* of established names.

(d) Comment by Edwin Kirke:

I concur, except in the case of Diadema [see Opinion 206].

(e) Comment (dated 16th January 1933) by W. P. Woodring:

I am not familiar with the usage of these Echinoderm names, but as a general principle—other things being equal—I am in favour of special protection for names of long-standing usage that are being threatened.

- 4. In December 1933 Dr. Stiles reported to the Commission (in Circular Letter 245) the comments received earlier in that year from the palaeontologists of the Geological Survey. In March 1935 Dr. Stiles reported to the Commission (in Circular Letter 291) that he had received no further comments on this or the other proposals submitted by Dr. Mortensen and his colleagues, and suggested that these proposals should be considered by the Commission when it met at Lisbon in September of that year.
- 5. When the International Commission assembled at Lisbon in 1935, the Secretary was absent through ill-health and the documents relating to this case were not available. The Commission accordingly found itself unable to deal with the present application.
- 6. No further progress had been made with this application at the time when, following the election of Mr. Francis Hemming to be Secretary to the International Commission in succession to Dr. Stiles, the papers relating to this and other current cases were transferred to his care in 1938. On the re-organisation of the Secretariat, the applications submitted by Dr. Mortensen, other than that relating to the name *Diadema* Gray, 1825, were grouped together under the Registered Number Z.N.(S.)18. Later, however, it was judged more convenient to register each of these cases separately, the Number Z.N.(S.)317 being then allotted to the present case. It had not been found possible to advance the consideration of this case when in September 1939 the outbreak of war in Europe led to the evacuation of the records

of the Commission from London to the country as a precaution against the risk of destruction through air raids. The Secretariat in London was re-opened in 1942, and steps were immediately taken to establish the *Bulletin of Zoological Nomenclature* as a means for bringing to the attention of zoologists applications submitted to the International Commission for decision. Work was at once started on outstanding applications with a view to arranging for their publication in the newly established *Bulletin*. Unfortunately, however, it was not then possible to send the present case to the printer, for the paper of 1932 in which it had originally been submitted did not deal with the matter in sufficient detail, and the circumstances of the war made it impossible at that time to communicate with Dr. Mortensen in Denmark.

- 7. In the summer of 1946, the conclusion of hostilities in Europe restored opportunities for foreign travel, and Dr. Mortensen paid a visit to London, largely for the purpose of discussing with Mr. Hemming the arrangements to be made for the further consideration of this, and his other, applications by the International Commission. It was then agreed that, as a first step, Dr. Mortensen should prepare, and should furnish to Mr. Hemming as quickly as possible, separate applications of a somewhat fuller kind in regard to each of the outstanding cases which in 1932 he had submitted collectively in his paper "A Vote on some Echinoderm Names" (paragraph 1).
- 8. Dr. Mortensen's revised application in the present case was received on 14th June 1947. It was as follows:—
- On the status of the names "Spatangus" Gray, "Ova" Gray, "Echinocaedium" Gray, "Schizaster" L. Agassiz, "Moira" A. Agassiz and "Brissus" Gray (Class Echinoidea, Order Spatangoida)

In December 1932, I submitted to the International Commission on Zoological Nomenclature a request that under their Plenary Powers they should validate certain generic names in the Phylum Echinoderma which, under the *Règles Internationales*, were either invalid or had, as their type species, other species than those universally attributed them. In each case I was of the opinion that greater confusion than uniformity

would clearly result from the strict application of the *Règles*. In this view I was supported by a large number of the leading specialists in this group. Full particulars of these cases were given in a paper entitled "A Vote on some Echinoderm Names" published in October 1932 (*Ann. Mag. nat. Hist.* (10) 10: 345—368). Owing to the ill-health of the then Secretary of the International Commission, and for other reasons, no progress was made with any of these applications except that of *Luidia* Forbes, which has been settled by the Commission in *Opinion* 129. The need for decisions on these cases has increased in urgency in the interval elapsed since 1932, and I now ask the Commission to take each of these cases into immediate consideration.

#### Discussion of the case of the genera named above.

In the old literature (Klein, Leske, Lamarck), the name Spatangus is taken in a very wide sense, including forms now distributed in various families and orders. Lamarck, in his "Systême des animaux sans vertèbres", 1801, p. 348, names under the genus Spatangus only one species, Spatangus vulgaris, which, as seen from the figures to which he refers (Klein, viz. Leske, Additamenta, tab. 48, figs. 4, 5; Encyclop. Méth. pl. 158, fig. 11; pl. 159, fig. 1), is the same as that which he names later on, 1816, in the "Hist. nat. des animaux sans vertèbres", p. 30, Spatangus carinatus—evidently forgetting that he had already in 1801 named it S. vulgaris. From the diagnosis of the genus and the "Nota", "On connaît beaucoup d'espèces dans l'état marin, et beaucoup d'autres dans l'état fossile, qui appartiennent à ce genre ", it is evident that his genus Spatangus is meant to comprise all the Spatangoids known by that time. Nevertheless, as he names only one species, that one ought-it would seem-to have been made the type of the restricted genus Spatangus, which means again that the species now named Brissus carinatus ought, according to a strict interpretation of the Rule, to be the type of the genus Spatangus, and under the name of S. vulgaris Lamk., since the species, although figured by Leske, is not named by the latter author. This, however, has never been done by any author on Echinoids.

The first author really to establish a genus *Spatangus* in the modern sense is Gray, in his "Attempt to divide the Echinidae, or Sea Eggs, into Natural Families", 1825, *Ann. of Philos.* 26. He has there established a family Spatangidae, with the three genera *Spatangus*, *Echinocardium* and *Brissus*. Under the first of these is named as only species *S. purpureus* Leske, t. 43, ff. 3, 5, viz., figures of O. Fr. Müller's *Spatagus purpureus*, *Zoologia Danica*, Tab. VI. Thus the genus has been properly established, with its genotype, and it has been accepted unanimously in this sense in the whole of the echinological literature, and in zoological literature in general, until recently changed by Lambert.

In 1902, Lambert ("Description des Echinides fossiles de la Province de Barcelone", Mém. Soc. Geol. France, 24. p. 54) protests in a note against the correctness of Gray's decisions, maintaining that,

according to Klein's conception of the genus *Spatangus*, the type generally understood as *Spatangus* does not rightly belong there and he tentatively proposes to name these forms *Prospatangus*. In Lambert and Thiéry's "Essai de nomenclature raisonnée des Echinides", p. 459, this name *Prospatangus* is then definitely introduced instead of the hitherto unanimously used name *Spatangus*, this latter name now being transferred to *Spatangus canaliferus* Lamarck (*Hist. nat. des Animaux sans vertèbres*, 3, 1816, p. 31), the species hitherto generally known as *Schizaster canaliferus* (Lamarck).

There is no doubt that Gray, in giving O. Fr. Müller's *Spatagus purpureus* as the type (viz., the only named) species of the genus *Spatangus*, does not follow Klein, who lets his *Spatangus* comprise the species "insignem habentes lacunam in dorso . . . sulcosque in vertice" (ed. 1778, p. 27). But Gray was the first post-Linnean author to establish the genus *Spatangus* properly, and then we cannot now overthrow the century-old use of the name in this sense in order to re-establish the name in the sense of the pre-Linnean non-binominal author Klein, be his distinction of various genera of Echinoids ever so much beyond Linnaeus' confusion of all Echinoids in the single genus *Echinus*. That Blainville, in 1827 (*Dictionaire d. Sciences nat.* Tome 50, p. 92), has *canaliferus* in his third group of the genus *Spatangus* cannot well, as seems to be the opinion of Lambert, do away with the fact of Gray having in 1825 made *purpureus* the type of the genus.

The species canaliferus Gray (Op. cit. 1825) made the type of his genus Ova; thus it is inadmissible now to make it the type of Spatangus. The genus Ova has not been recognised until recently H. L. Clark (Hawaiian a.o. Pacific Echini, Echinoneidae . . . Spatangidae, Mem. Mus. Comp. Zool. 46. 1917, p. 192) revived it, restricting it to the species *canaliferus*, which, from a taxonomic point of view, is justifiable. The type of the genus Schizaster, established by L. Agassiz, 1836, in his "Prodrome d'une Monographie des Radiaires", Mém. Soc. Neuchâtel, 1, p. 18, is the fossil (Tertiary) species studeri Agassiz. is of the same type as the recent form *lacunosus*, which has always been designated as Schizaster, and even by Lambert and Thiéry in their "Essai de nomenclature raisonnée" is allowed to remain in the genus Schizaster (though erroneously referred to the subgenus Brisaster). Thus—leaving canaliferus aside as the type of its own genus, Ova there is no discrepancy about the genus Schizaster and the genotype, studeri Agassiz.

The genus *Echinocardium*\* was established by Gray in his paper of 1825 (p. 430), with the species *atropos* Lamk. as the first named, which ought, accordingly, to have been accepted as the type of the genus. L. Agassiz in his "Prodromus" does not accept the name *Echino*-

<sup>\*</sup> The name Echinocardium is first found in Leske's Additamenta, p. 73, as a translation of the Belgian "Egelhart" used by van Phelsum.

cardium, but creates a new genus, Amphidetus, under which Echinocardium is mentioned as a synonym; the species (Spatangus) arcuarius Goldfuss is the first named, the species atropos Lamarck being transferred to his new genus *Schizaster* as the first species named, the second being *S. studeri* Agassiz. In Agassiz and Desor's "Catalogue raisonné" the first species named under *Amphidetus* is *cordatus* (Pennant). In Desor's "Synopsis des Echinides fossiles", p. 406, the genus Echinocardium is again taken up, with Amphidetus as a synonym, the species cordatum (Echinus cordatus, Pennant, 1777. British Zoology, 4. p. 69) being the first named; the species atropos Lamk. had in the meantime been made the type of another genus, Moera, by Michelin (" Notice sur un nouveau genre à établir dans la famille des Spatangoides sous le nom de Moera", Rev. et Magaz. de Zool. 1855, p. 245). This name was changed by A. Agassiz (Revision of Echini, 1872, p. 146) into Moira, the name Moera being preoccupied. Since then the genera Echinocardium and Moira have been unanimously accepted in the sense adopted by Desor and Michelin, with the species cordatus and atropos respectively as the genotypes. Whether Echinocardium should, like the genus Ova, be confined to the species with the pores in the frontal ambulacrum in close double series, viz., cordatum (and australe, if the latter be maintained as a separate species) is a matter of no serious nomenclatorial consequence, the other species generally referred to Echinocardium would then have to be transferred to the revived genus Amphidetus.

Under the genus *Brissus*, Gray names as first species *ventricosus* Leske (tab. 26, fig. A), the following being *unicolor* Leske, *carinatus* Leske and *columbaris* Seba. The species *ventricosa* has, however, later on been transferred to the genus *Meoma*, established by Gray, 1851, with the West Indian species *grandis* as the type; the species *unicolor* is thus left as the type of the genus *Brissus*, about which fact there is no disagreement among the various authors.

All these names are so intricately connected that they cannot be dealt with separately.

In order to avoid the very great, almost inextricable confusion which would be the consequence of the strict application of the *Règles* in these cases, I ask the International Commission on Zoological Nomenclature, acting under the Plenary Power conferred upon them by the International Congress of Zoology, under suspension of the *Règles* to place the following names, with their genotypes, as specified, on the *Official List of Generic Names*:

Spatangus Gray, with genotype Spatangus purpureus O. Fr. Müller, 1788. (Zoologia Danica Tab. VI.).

Ova Gray, with genotype Spatangus canaliferus Lamarck. (Hist. anim. sans Vertèbres. 3. 1816, p. 31).

Schizaster L. Agassiz, with genotype Schizaster studeri L. Agassiz. (Sismonda. Echinidi fossili del contado di Nizza. 1843, p. 32. Tab. II. fig. 4).

Echinocardium Gray, with genotype Echinus cordatus Pennant (1777. British Zoology. 4. p. 69, Pl. XXXIV, Fig. 75).

Moira A. Agassiz, with genotype Spatangus atropos Lamarck (1816, Hist. nat. des anim. s. Vertèbres. 3, p. 32).

Brissus Gray, with genotype Spatangus brissus var. unicolor Leske. (1778. Additamenta ad Kleinii Nat. Disp. Echinoid. p. 248. Tab. XXVI. Fig. B, C.)

In my "Vote on some Echinoderm names" quoted above, this proposal was supported by: Bather, Brighton, A. H. Clark, H. L. Clark, Cottreau, Currie, Diakonov, Döderlein, Ekman, Faas, Fedotov, Fisher, Gislén, Goto, Gregory, Grieg, Hawkins, Hecker, Heding, Hérouard, v. Hofsten, Jackson, Klinghardt, Lieberkind, Mortensen, Nobre, Ohshima, Panning, Ravn, Reichensperger, Schmidt, Spencer, Stefanini, Valette, Vaney, Wanner, Yakovlev.

9. On 14th November 1947 a notice of the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers in the present case was issued to the serial publications prescribed by the Ninth International Congress of Zoology, Monaco, 1913. The publication of this notice elicited no objections to the action proposed in this case.

# III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

10. The present application was considered by the International Commission on Zoological Nomenclature at the Fourteenth Meeting of its Paris Session held at the Sorbonne in the Amphithéâtre Louis-Liard on Monday, 26th July 1948 at 2030 hours. The following is an extract from the Official Record of the Proceedings of the International Commission (1) summarising the points made in the discussion at the foregoing meeting and (2) setting out the decision then reached by the Commission in regard to this case (Paris Session, 14th Meeting, Conclusion 36) (1950, Bull. zool. Nomencl. 4: 522—529):—

THE COMMISSION examined Commission File Z.N.(S.) 317, containing an application submitted by Dr. (now Commissioner) Th. Mortensen (Denmark) on his own behalf and on that of a large group of other specialists in the Class Echinoidea that the Commission should use their Plenary Powers in various ways to validate existing nomenclatorial practice in regard to six associated generic names in the foregoing Class, where, if the Règles were to be strictly applied, serious disturbance and consequential confusion would inevitably ensue. The generic names in question were: Spatangus Gray, 1825; Ova Gray, 1825; Schizaster Agassiz [1836]; Echinocardium Gray, 1825; Moira Agassiz, 1827; Brissus Gray, 1825. The following is a summary of the principal points made by Dr. Mortensen in regard to each of the foregoing names:—

(1) Spatangus Gray, 1825: This name had been used by the older authors (Klein, Leske) in a very wide sense under which it covered species now included in different families and even different Orders. Lamarck (1816) applied it to all the Spatangoids, of which, however, he cited only one by name, the new nominal species Spatangus vulgaris Lamarck (which had proved to be the same species as that now known as Brissus carinatus). therefore Lamarck were treated as the author of the name Spatangus, that generic name would replace Brissus Gray and the species now known as Brissus carinata would have to be known as Spatangus vulgaris Lamarck. No one had, however, adopted this course. The true author of the generic name Spatangus in the modern sense was Gray (1825), who had placed in this genus only Spatagus purpureus Müller (O.F.), 1776. regarded, the genus *Spatangus* Gray was monotypical with the above species as its type species. It was in this sense that the generic name Spatangus had been used by all subsequent specialists until in 1902 Lambert had advanced the view that this name should be used not in the sense in which it had been employed by Gray in 1825, but in the sense in which it had first been used by Klein; that on this basis this generic name was not applicable to the species Spatagus purpureus Müller, which accordingly Lambert placed in a new genus to which he applied the name *Prospatangus*. Dr. Mortensen agreed that Gray had used the name Spatangus in a sense different from that of Klein. It would, however, in Dr. Mortensen's view, create the greatest confusion to abandon

the use of the name *Spatangus* for *purpureus* Müller and to apply that name, as suggested by Lambert, to *Spatangus canaliferus* Lamarck, 1816.

- (2) Ova Gray, 1825: The type species of this genus by monotypy was Spatangus canaliferus Lamarck, 1816. Accordingly under Lambert's view Ova Gray was an objective synonym of Spatangus as interpreted by that author. Dr. Mortensen asked that, when the Commission validated the name Spatangus as from Gray, 1825, and in consequence validated the designation of Spatagus purpureus Müller as the type species of that genus, they should also confirm the availability of Ova Gray, 1825, with Spatangus canaliferus Lamarck as its type species.
- (3) Schizaster Agassiz [1836]: The type species of this genus was the fossil species Schizaster studeri Agassiz, 1840. This genus had been accepted even by Lambert and Thiéry notwithstanding their views on the generic position of Spatangus canaliferus Lamarck (see (1) above), a species which had formerly been referred to the genus Schizaster.
- (4) Echinocardium Gray, 1825, and (5) Moira Agassiz, 1872: Gray had placed in the genus Echinocardium three species, of which the first was Spatangus atropos Lamarck, 1816. Agassiz, the next author to deal with this subject, rejected the name Echinocardium Gray, sinking it as a synonym of a new generic name of his own (Amphidetus). At the same time Agassiz transferred Spatangus atropos Lamarck, 1816, to his new genus Schizaster, in which also (as shown in (3) above) he placed the new species Schizaster studeri. In their "Catalogue raisonée" Agassiz and Desors cited Echinus cordatus Pennant, 1777, as the first species of the genus Amphidetus Agassiz, 1836 (which, as noted above, Agassiz had previously adopted in place of the earlier name *Echinocardium* Gray, 1825). In a later paper ("Synopsis des Echinides fossiles") Desors accepted *Echinocardium* Gray (sinking *Amphidetus* Agassiz as a synonym), citing Echinus cordatus Pennant as the first species. In the meantime Michelin had established the genus Moera Michelin, 1855, based upon Spatangus atropos Lamarck, which was accordingly treated by later authors as though it had been designated as the type species of the genus Moera Michelin. Later it was found that

this generic name was an invalid homonym, and Agassiz (1872) accordingly altered it to *Moira*. Since that date all specialists in the group had accepted the genera *Echinocardium* Gray, 1825, and *Moira* Agassiz, 1872, treating *Echinus cordatus* Pennant, 1777, as the type species of *Echinocardium* Gray, 1825, and *Spatangus atropos* Lamarck, 1816, as the type species of *Moira* Agassiz, 1872. Dr. Mortensen and his colleagues asked that this practice should be validated under the Plenary Powers.

(6) Brissus Gray, 1825: Gray had established this genus for four nominal species. The trivial names of the first and second of these species were ventricosus Leske and unicolor Leske respectively. The species bearing the first of these names had later been transferred to the genus Meoma Gray, 1851. Thereafter, the species bearing the trivial name unicolor Leske had been treated by all authors as the type species of the genus Brissus Gray. Dr. Mortensen asked the Commission to validate this practice under their Plenary Powers.

In conclusion, Dr. Mortensen had expressed the view that the six generic names covered by the present application were so inextricably connected that they could not be treated separately. He accordingly asked the Commission to use their Plenary Powers to validate all the generic names in question, as from the authors and dates of publication, and with the type species, indicated in the application. This application had been one of the eight applications on which, before submitting it to the Commission (in 1932), Dr. Mortensen had consulted 38 leading specialists who were working on the group in various parts of the world. Of these specialists, 35 had voted in favour of the submission to the Commission of the present application, two (Bather; Brighton) had not voted, while one only (Lambert) had voted against the course proposed.

THE ACTING PRESIDENT (MR. FRANCIS HEMMING) said that the present group of applications had been advertised but the advertisement had elicited no adverse comment.

IN DISCUSSION the view was expressed that it was evident that the strict application of the Règles would completely change the way in which these generic names would in future have to be used. Great disturbance in nomenclatorial practice would be involved and this would inevitably lead to widespread confusion, in view of the very extensive literature, extending far beyond the literature of systematic zoology, which had accumulated around such names as Spatangus and Echinocardium. For these reasons and, having regard also to the strong support for these proposals expressed all but unanimously by the leading workers in this field in both Hemispheres, it was generally agreed that the objects sought by the applicants should be met by the Commission. On the other hand, some of the arguments advanced in the application were not of a character which could be entertained by the Commission; in particular, it was not possible either to ignore for the purposes of Articles 25 and 34 the uses of a generic name prior to a certain date (on the ground that the earlier authors had placed discordant material in the genus concerned), or, under Article 30 to accord any right to be accepted as the type species of a genus to a given species, on the ground only that it was the first of the species to have been cited, among others, under the name of the genus by its original author. In drawing up the conclusion of the Commission on these applications, it would be necessary to pay due regard to these considerations. Again in some cases (for example, in the case of the names Schizaster Agassiz, [1836], and Moira Agassiz, 1872 (as derived from the invalid homonym Moera Michelin, 1855), it was not clear from the application how the species there mentioned as type species of the genera concerned had come to be recognised as such, whether that process had been in accordance with the Rules specified in Article 30 and therefore whether the use of the Plenary Powers was necessary or not.

In further discussion it was agreed that the Plenary Powers should be used, where this was necessary, to secure the ends sought in the present application, but that, where it was doubtful (for any reason) whether the use of those powers was necessary to achieve the desired object, it should be expressly recorded that the Plenary Powers were used for that purpose only to the extent that might be necessary therefor. The Acting President, as Secretary to the Commission, was accordingly invited to examine

the present application from the foregoing point of view after the close of the present Session and, in the light of that examination, to draft the Conclusion on this matter in such a way as, in his opinion, would meet fully the objects set out in the application and also the points made in the discussion as recorded above.

#### THE COMMISSION agreed:—

- (1) to use their Plenary Powers :-
  - (a) to suppress the undermentioned generic names:—
    - (i) Brissus Müller, 1781 (Class Echinoidea)
    - (ii) Brissus Modeer, 1793 (Class Echinoidea)
    - (iii) Brissus Link, 1807 (Class Echinoidea)
    - (iv) Brissus Oken, 1815 (Class Echinoidea)
    - (v) Brissus Dahl, 1823 (emend. of Bryssus Dejean, 1821) (Class Insecta, Order Coleoptera)
    - (vi) Bryssus Dejean, 1821 (Class Insecta, Order Coleoptera)
    - (vii) Brissus, as used by any other author prior to the publication of Brissus Gray, 1825
    - (viii) *Echinocardium* Leske, 1778, in so far as that name was published by that author as a generic name
      - (ix) Spatangus Leske, 1778
      - (x) Spatangus Modeer, 1793
      - (xi) *Spatangus*, as used by any other author prior to the publication of *Spatangus* Gray, 1825;
  - (b) to validate the undermentioned generic names :-
    - (i) Brissus Gray, 1825 (Class Echinoidea)

- (ii) Echinocardium Gray, 1825 (Class Echinoidea) in so far as this name requires to be validated by reason of the existence of the prior name Echinocardium Leske, 1778, suppressed, in so far as may be necessary, in (a) (viii) above;
- (iii) Spatangus Gray, 1825 (Class Echinoidea);
- (c) to set aside all selections of type species for the undermentioned genera made prior to the present decision and to designate the species severally specified below to be the type species of the genera concerned:—
  - (i) Echinus cordatus Pennant, 1777, to be the type species of the genus Echinocardium Gray, 1825, as validated, in so far as may be necessary, in (b)(ii) above;
  - (ii) Schizaster studeri Agassiz (L.), 1840, to be the type species of the genus Schizaster Agassiz (L.) [1836];
  - (iii) Spatangus brissus var. unicolor Leske, 1778, to be the type species of the genus Brissus Gray, 1825, as validated in (b)(i) above;
  - (iv) Spatagus purpureus Müller (O.F.), 1776, to be the type species of the genus Spatangus Gray, 1825, as validated in (b)(iii) above;
- (d) in so far as the use of the Plenary Powers may be necessary to secure that *Spatangus atropos* Lamarck, 1816, shall be the type species of the genus *Moira* Agassiz (A.), 1872, to set aside all selections of type species made for that genus prior to the selection of the above species by Clark (H.L.), 1917;
- (2) to place on record that the reputed generic name *Brissus* Leske, 1778 (Class Echinoidea), has no existence under the *Règles*, as interpreted in *Opinion* 183 (now, as agreed upon at the meeting noted in the margin<sup>1</sup> (*Paris Session*, 6th Meeting, Conclusion 12), to be incorporated in the *Règles*), having regard to the fact that this term

<sup>1</sup> Not reproduced.

was published by Leske in the nominative plural (as *Brissi*) instead of in the nominative singular as required by Article 8;

(3) to place the names of the undermentioned genera of the Class Echinoidea (Order Spatangoida), with the type species severally specified below, on the Official List of Generic Names in Zoology:—

Name of genus (1)

Type species of genus specified in Col. (1) (2)

Brissus Gray, 1825 as validated in (1)(b)(i) above.

Spatangus brissus var. unicolor Leske, 1778 (type species designated under the Plenary Powers in (1)(c)(iii) above).

Echinocardium Gray, 1825, as validated in (1)(b)(ii) above.

Echinus cordatus Pennant, 1777 (type species designated under the Plenary Powers in (1)(c)(i) above).

Moira Agassiz (A.), 1872.

Spatangus atropos Lamarck, 1816 (type species designated under the Plenary Powers in (1)(d) above).

Ova Gray, 1825

Spatangus canaliferus Lamarck, 1816 (type species by monotypy).

Schizaster Agassiz (L.) [1836]

Schizaster studeri Agassiz (L.), 1840 (type species designated under the Plenary Powers in (1)(c)(ii) above).

Spatangus Gray, 1825, as validated in (1)(b)(iii) above.

Spatagus purpureus Müller (O.F.), 1776 (type species designated under the Plenary Powers in (1)(c)(iv) above).

- (4) to place the undermentioned generic names and reputed generic names on the Official Index of Rejected and Invalid Generic Names in Zoology:—
  - (i) the eleven generic names suppressed under the Plenary Powers, as specified in (1)(a)(i) to (xi) above;

- (ii) the reputed but non-existent generic name *Brissus* Leske, 1778, rejected under (2) above;
- (iii) Prospatangus Lambert, 1902;
- (iv) Moera Michelin, 1855;
- (5) to place the undermentioned trivial names on the Official List of Specific Trivial Names in Zoology:—

atropos Lamarck, 1816 (as published in the binominal combination Spatangus atropos)

canaliferus Lamarck, 1816 (as published in the binominal combination Spatangus canaliferus)

cordatus Pennant, 1777 (as published in the binominal combination Echinus cordatus)

purpureus Müller (O.F.), 1776 (as published in the binominal combination Spatagus purpureus)

studeri Agassiz (L.), 1840 (as published in the binominal combination Schizaster studeri)

unicolor Leske, 1778 (as published as a sub-specific trivial name in the trinominal combination Spatangus brissus var. unicolor)

- (6) to render an *Opinion* recording the decisions specified in (1) to (5) above.
- 11. In accordance with the invitation addressed to him by the International Commission at its Paris Session—see the last paragraph of the Official Record of the discussion on this case, quoted on page 382 of the present Opinion-Mr. Hemming, as Secretary to the Commission, made a close examination, after the Paris Congress, of the problems involved in the present application with the object of determining precisely the limits within which action by the Commission under its Plenary Powers was necessary to give effect to the decision then taken by the Commission, namely to grant the relief sought in this case by Dr. Mortensen and his colleagues. In conformity with a request made by the Commission at the same time, the text of the decision (Conclusion 36) of the Commission in this case was drafted in the light of the Report so made by the Secretary. That Report, which was dated 22nd August 1949, was submitted to, and approved by, the International Commission by Postal Vote at the same time that

the draft of the Official Record of its Paris Proceedings (1950, Bull. zool. Nomencl. 4: xiii—xv) was so submitted and approved. Mr. Hemming's Report, which was annexed to the Official Record of the Proceedings of the International Commission in regard to the present case (1950, Bull. zool. Nomencl. 4: 529—530), was as follows:—

In accordance with the request of the Commission, I have re-examined the application submitted in this case for the purpose of determining how the objects set forth therein can be attained with the minimum use of the Plenary Powers, those powers being used only in respect of those purposes which can be achieved in no other way and being used conditionally "in so far as may be necessary" in cases where such use may be necessary to achieve the desired ends but that need is not clearly established. In the course of this re-examination, I have had the benefit of the advice of Dr. Mortensen. In addition, I have consulted a number of the books and papers cited in the present application. The conclusions which I have reached are as follows:—

- (1) Brissus and Spatangus: If, as proposed, the generic names Brissus and Spatangus are to be made available in the sense in which they were respectively used by Gray in 1825, it will be necessary to use the Plenary Powers to suppress all prior uses of these names, and to validate these two names as from Gray, 1825. In view of the fact that Gray did not publish the names Brissus and Spatangus as new names and each, in order to acquire recognition under the Règles, requires the use by the Commission of their Plenary Powers, the same powers should be used to designate the type species of these genera. Quite apart from this consideration, the Plenary Powers would be necessary to ensure that the animal to which in 1778 Leske applied the trivial name unicolor should be the type species of this genus, for, even if that was the first of the originally included species to be selected by a later author to be the type species of this genus (which appears probable from, but is not clearly established in, the application submitted to the Commission), the type species of this genus would, under the Règles (Article 30, Rule (d)), be Spatangus brissus Leske, 1778, by absolute tautonymy, in view of the fact that the trivial name unicolor was published by Leske in the combination Spatangus brissus var unicolor. If it had not been for the consideration indicated above, it would not have been necessary to use the Plenary Powers to designate Spatagus purpureus Müller (O.F.), 1776, as the type species of the genus *Spatangus* Gray, 1825, for that nominal species (attributed, however, to Leske) was the sole species then cited (: 430) by Gray under the generic name *Spatangus* and would accordingly have been the type species by monotypy.
- (3) Echinocardium Gray, 1825: This name is usually treated as having been first published in 1825 by Gray (by whom it was doubtfully attributed to van Phelsum), but, as pointed out in the application, the term Echinocardium appears in Leske's Additamenta of 1778 as a

translation of the Belgian expression "Egelhart" used by van Phelsum. In order, therefore, to obviate the risk of a claim later being advanced that Leske used this word as a generic name and therefore that *Echinocardium* Gray, 1825, is an invalid homonym, the conditional use of the Plenary Powers under the formula "in so far as the use of the Plenary Powers may be necessary" is desirable to suppress the name *Echinocardium* as used (and in so far as it was used) by Leske in 1778 as a generic name and to validate, in so far as necessary, the generic name *Echinocardium* Gray, 1825. As regards the type species of this genus, the Plenary Powers are certainly necessary to secure the acceptance of *Echinus cordatus* Pennant, 1777, for that nominal species was not cited by Gray (: 430) when he published the generic name *Echinocardium*.

- (4) Schizaster Agassiz (L.) [1836]: The name Schizaster Agassiz is itself an available name, but the Plenary Powers are needed to secure that Schizaster studeri Agassiz should be its type species, since although that name (binominal combination) appears in Agassiz's original description of the genus Schizaster, it was then only a nomen nudum, the trivial name in question not being published with an indication until 1840 (Agassiz, 1840, Cat. Ect. Ech.: 3).
- (5) Moira Agassiz (A.), 1872: This name (which was published as a substitute for the invalid homonym Moera Michelin, 1855), is an available name; the species, Spatangus atropos Lamarck, 1816, which is commonly treated as its type species, is eligible for selection as such, having been one of the species included by Michelin in his genus Moera. Moreover, that species has certainly been selected as the type species of this genus, e.g. by Clark (H.L.) in 1917 (Mem. Mus. comp. Zool., 46: 195). It is not clear, however, either whether this was the first occasion on which this species was selected as the type species or whether any of the other originally included species had previously been so selected. In order to prevent any question being raised as to the validity of the selection of this species as the type species of this genus, it would be well, as in the case of the question of the availability of the generic name Echinocardium Gray, 1825 (discussed in (3) above), to use the Plenary Powers conditionally and "to such extent as may be necessary" to set aside all selections of type species for the genus Moira Agassiz, 1872, made prior to the selection of Spatangus atropos Lamarck as such by Clark (H.L.) in 1917.
- (6) Ova Gray, 1825: This name, wrongly attributed by Gray (: 431) to van Phelsum, is an available name and the type species of the genus so named is Spatangus canaliferus Lamarck, 1816, by monotypy. The Plenary Powers are thus not required either to validate this name or to secure that the species accepted as the type species of this genus should in fact be its type species. This name was only included in the present application because the type species of this genus had been (erroneously) alleged by Lambert (1902) to be referable to the genus Spatangus, as interpreted by that author.

In the light of the foregoing conclusions, I have drafted the record of the Commission's decision in this case in the terms set forth in Conclusion 36 of the Minutes of the 14th Meeting of the Paris Session, at which it was discussed, those terms giving effect to the decision of the Commission to meet the objects sought by Commissioner Mortensen in the present application and at the same time involving, as desired by the Commission, the minimum use of the Plenary Powers consistent with securing the objects referred to above.

12. The following are the original references for the names which appear in the decision set out in paragraph 10 above :—

atropos, Spatangus, Lamarck, 1816, Hist. nat. Anim. s. Vertèbr. 3:32

Brissus Leske, 1778, Addit. J. T. Klein Nat. Dispositio Echinodermat.: 29

Brissus Müller (O.F.), 1781, Zool. dan. (Danm. Norges Dyrs Hist.) [Danish ed.] : 20

Brissus Modeer, 1793, K. Vet. Acad. Nya Handl., Stockholm 14:14 Brissus Link, Beschr. nat. Samml. Univ. Rostock 4:24

Brissus Oken, 1815, Lehrb. Naturgesch. 3(1): 354

Brissus (emend. of Bryssus Dejean, 1821) Dahl, Col. u. Lepid.: 61 Brissus Gray (J.E.), Ann. Phil. 26: 431

Bryssus Dejean, 1821, Cat. Coléopt.: 96

canaliferus, Spatangus, Lamarck, 1816, Hist. nat. Anim. s. Vertèbr. 3:31

cordatus, Echinus, 1777, Pennant, Brit. Zool. (ed. 4) 4:58

Echinocardium Leske, 1778, Addit. J. T. Klein Nat. Dispositio Echinodarmat.: 73

Echinocardium Gray, 1825, Ann. Phil. 26: 430

Moera Michelin, 1855, Rev. Mag. Zool. (2)7: 246

Moira Agassiz (A.), 1872, Ill. Cat. Mus. Harvard 3(No. 7): 146 Ova Gray (J.E.), 1825, Ann. Phil. 26: 431

Prospatangus Lambert, 1902, Mém. géol. Soc. France (Pal.)9 No. 3)(Mem. 24): 55

purpureus, Spatagus [sic], Müller (O.F.), 1776, Zool. dan. Prodr. : 236

Schizaster Agassiz (J.L.R.), 1836, Mém. Soc. Sci. nat. Neuchatel **1**: 185

Spatangus Leske, 1778, Addit. J. T. Klein Nat. Dispositio Echinodermat. : 230

Spatangus Modeer, 1793, K. Vet. Acad. Nya Handl., Stockholm **14**: 14

Spatangus Gray (J.E.), 1825, Ann. Phil. 26: 430

studeri, Schizaster, Agassiz (J.L.R.), 1840, Cat. syst. Ectyp. Echinodermat. Foss. Mus. Neocom.: 3 unicolor, Spatangus brissus var., Leske, 1778, Addit. J. T. Klein Nat. Dispositio Echinodermat.: 248, pl. 26, figs. B, C.

13. The genders of the following generic names, referred to in the decision quoted in paragraph 10 above, are:—

Brissus Gray, 1825: masculine. Echinocardium Gray, 1825: neuter.

Spatangus Gray, 1825: masculine.

Schizaster Agassiz (J.L.R.), [1836]; masculine.

Moira Agassiz (A.), 1872: feminine.

Ova Gray, 1825: feminine.

- 14. The decision taken in the present case was reported to, and approved by, the Section on Nomenclature of the Thirteenth International Congress of Zoology, Paris, 1948, at its Sixth Meeting held on 26th July 1948 (1950, *Bull. zool. Nomencl.* 5: 117).
- 15. The Ruling given in the present *Opinion* was concurred in by the sixteen (16) Commissioners and Alternate Commissioners present at the Paris Session of the International Commission, namely:—

Beltrán vice Cabrera; Boschma; Bradley; di Caporiacco; Hemming; Hindle vice Jordan; Jorge vice do Amaral; Kirby vice Stoll; Lemche vice Dymond; Mansour vice Hankó; Metcalf vice Peters; Riley vice Calman; Rode; Spärck vice Mortensen; van Straelen vice Richter; Usinger vice Vokes.

- 16. The Ruling given in the present *Opinion* was dissented from by no Commissioner or Alternate Commissioner present at the Paris Session.
- 17. At the time of the adoption of the Ruling given in the present *Opinion*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression "trivial name" and the *Official List* reserved for recording such names was styled the *Official List of Specific Trivial Names in Zoology*, the word "trivial" appearing also in the title of the *Official Index* reserved for recording rejected and

invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the expression "specific name" was substituted for the expression "trivial name" and corresponding changes were made in the titles of the *Official List* and *Official Index* of such names (1953, Copenhagen Decisions zool. Nomencl.: 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Opinion*.

- 18. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.
- 19. The present Opinion shall be known as Opinion Two Hundred and Nine (209) of the International Commission on Zoological Nomenclature.

DONE in London this Twenty-Third day of November, Nineteen Hundred and Fifty-Three.

Secretary to the International Commission on Zoological Nomenclature

FRANCIS HEMMING